

What Is Claimed Is:

1. A sensor comprising a sensor element (2) and at least one digital interface (5), means (6) being present for transmitting a fault pattern via the at least one digital interface (5).

2. The sensor as recited in Claim 1, wherein an eight-bit word (MONI) in a data telegram is provided for the fault message.

3. The sensor as recited in Claim 2, wherein for generation of the fault message, means (4) are present for monitoring at least one phase-lock loop of the sensor and/or at least one control voltage in terms of a first predefined range, and/or the output values of at least one analog/digital converter in terms of a second predefined range, and/or output values of at least one digital/analog converter in terms of a third predefined range, and/or dynamic limits of at least one capacitance/voltage converter in terms of a fourth predefined range, and/or at least one offset controller in terms of a fifth predefined range, and/or at least one common-mode controller in terms of departure from a sixth predefined range, and/or at least one variable representing a sensor oscillation in terms of a seventh predefined range, and/or impermissible values of at least one counter as defined, a respective value being storable in a respective register in the event of a fault.

4. The sensor as recited in Claim 3, wherein the respective register is reset after an end of the respective fault.

5. A control unit comprising a processor (7) that receives at least one signal from the sensor (1) as recited in one of Claims 1 through 4 via the at least one digital interface (5), the processor (7) evaluating the at least one sensor signal as

a function of the fault pattern.

6. The control unit as recited in Claim 4,
wherein the sensor (1) is disposed inside the housing of the
control unit (10).

7. A method for monitoring at least one sensor (1), the at
least one sensor (1) transmitting a fault pattern to a
processor (7).

8. The method as recited in Claim 7,
wherein the sensor signal is used for a restraint system (9).

9. The method as recited in Claim 7 or 8,
wherein the sensor signal is conveyed to a vehicle dynamics
system.